CLAIMS

1. Structure comprising, successively:
- a first layer of high density polyethylene (HDPE),
- a layer of binder,
- a second layer of EVOH or of a mixture based on EVOH,
- optionally a third layer of polyamide (A) or of a mixture of polyamide (A) and polyolefin (B).

2. Structure according to Claim 1, also comprising a layer of binder between the second and the third layer.

3. Structure according to ~~either of~~ Claims 1 ~~and 2,~~ in which the binder comprises:
- 5 to 30 parts of a polymer (D) which itself comprises a mixture of a polyethylene (D1) with a density of between 0.910 and 0.940 and of a polymer (D2) chosen from elastomers, very low density polyethylenes and metallocene polyethylenes, the mixture (D1) + (D2) being co-grafted with an unsaturated carboxylic acid,
- 95 to 70 parts of a polyethylene (E) with a density of between 0.910 and 0.930,
- the mixture of (D) and (E) being such that:
  - its density is between 0.910 and 0.930,
  - the content of grafted unsaturated carboxylic acid is between 30 and 10,000 ppm,
  - the MFI (ASTM D 1238 - 190°C - 2.16 kg) is between 0.1 and 3 g/10 min, the MFI denotes the melt flow index.

4. Structure according to Claim 3, in which the density of the binder is advantageously between 0.915 and 0.920.

5. Structure according to Claim 3 ~~or 4,~~ in which (D1) and (E) are LLDPEs which have the same comonomer.

6. Structure according to ~~either of~~ Claims 1 ~~and 2,~~ in which the binder comprises:
- 5 to 30 parts of a polymer (F) which itself comprises a mixture of a polyethylene (F1) with a

density of between 0.935 and 0.980 and of a polymer (F2) chosen from elastomers, very low density polyethylenes and ethylene copolymers, the mixture (F1) + (F2) being co-grafted with an unsaturated carboxylic acid,

- 95 to 70 parts of a polyethylene (G) with a density of between 0.930 and 0.950,

- the mixture of (F) and (G) being such that:

• its density is between 0.930 and 0.950,

• the content of grafted unsaturated carboxylic acid is between 30 and 10,000 ppm,

• the MFI (melt flow index) measured according to ASTM D 1238 at 190°C - 21.6 kg is between 5 and 100.

7. Structure according to Claim ~~1 or 2,~~ in which the binder is a polyethylene grafted with maleic anhydride, having an MFI of 0.1 to 3, a density of between 0.920 and 0.930 and containing 2 to 40% by weight of insolubles in n-decane at 90°C.

8. Structure according to Claim 7, in which the grafted polyethylene is diluted in a non-grafted polyethylene and such that the binder is a mixture of 2 to 30 parts of a grafted polyethylene with a density of between 0.930 and 0.980 and from 70 to 98 parts of a non-grafted polyethylene with a density of between 0.910 and 0.940.

9. Structure according to Claim 1 ~~or 2,~~ in which the binder is a mixture consisting of a polyethylene of HDPE, LLDPE, VLDPE or LDPE type, 5 to 35% of a grafted metallocene polyethylene and 0 to 35% of an elastomer, the total being 100%.

10. Structure according to ~~any one of the~~ preceding claims, in which the polyamide of the third layer is a copolyamide.

11. Structure according to any one of the preceding claims, in which the polyolefin (B) of the third layer comprises (i) a high density polyethylene (HDPE) and (ii) a mixture of a polyethylene (C1) and a polymer (C2) chosen from elastomers, very low density

polyethylenes and ethylene copolymers, the mixture (C1) + (C2) being co-grafted with an unsaturated carboxylic acid.

12. Structure according to any one of Claims 1 to 10, in which the polyolefin (B) of the third layer comprises (i) a high density polyethylene (HDPE), (ii) a polymer (C2) chosen from elastomers, very low density polyethylenes and ethylene copolymers (C2) being grafted with an unsaturated carboxylic acid and (iii) a polymer (C'2) chosen from elastomers, very low density polyethylenes and ethylene copolymers.

13. Structure according to any one of Claims 1 to 10, in which the polyolefin (B) of the third layer comprises (i) polypropylene and (ii) a polyolefin which results from the reaction of a polyamide (C4) with a copolymer (C3) comprising propylene and a grafted or copolymerized unsaturated monomer X.

14. Structure according to any one of Claims 1 to 10, in which the polyolefin (B) of the third layer comprises (i) a polyethylene of LLDPE, VLDPE or metallocene type and (ii) an ethylene-alkyl (meth)acrylate-maleic anhydride copolymer.

15. Structure according to ~~any one of~~ Claims 1 ~~to 10~~, in which the polyamide (A) of the third layer is chosen from mixtures of (i) polyamide and (ii) copolymer containing PA 6 blocks and PTMG blocks and mixtures of (i) polyamide and (ii) copolymer containing PA 12 blocks and PTMG blocks; the ratio of the amounts of copolymer and of polyamide by weight being between 10/90 and 60/40.

16. Structure according to Claim 15, in which the polyolefin (B) of the third layer comprises (i) a polyethylene of LLDPE, VLDPE or metallocene type and (ii) an ethylene-alkyl (meth)acrylate-maleic anhydride copolymer.

17. Structure according to Claim 15, in which the polyolefin comprises two functionalized polymers

comprising at least 50 mol% of ethylene units and which can react to form a crosslinked phase.

18. A device ~~Devices~~, for transferring or storing fluids and more particularly tubes, tanks, chutes, bottles and containers consisting of ~~the~~ a structure according to ~~any one of the preceding~~ claims 1 to 17, and in which the barrier layer consisting of the second or of a combination of the second and the third layer is in direct contact with the fluid contained or transported.